

IN THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A vehicle front body structure, comprising:

a pair pair of longitudinal structural members;

a front compartment formed inside the longitudinal structural members;

a power unit connected to the longitudinal structural members and placed in the front compartment; and

an impact load transfer mechanism formed outside the front compartment and changes changing the an impact load direction to a lateral direction for transmitting the an impact load to one of the longitudinal structural member members and the power unit directly.

2. (Currently Amended) The vehicle front body structure of claim 1, A vehicle front body structure, comprising:

a pair of longitudinal structural members:

a front compartment formed inside the longitudinal structural members

a power unit connected to the longitudinal structural members and placed in the front compartment; and

an impact load transfer mechanism formed outside the front compartment and changing an impact load direction to a lateral direction for transmitting an impact load to one of the longitudinal structural members and the power unit directly.

wherein the longitudinal structural members ~~comprises~~ comprise a pair of side members arranged on left and right sides of the front compartment to extend in the fore-and-aft direction of the vehicle, the side members each having a reinforcing part for mounting the power unit,

wherein the vehicle front body structure further comprises a bumper reinforcement connected with the front ends of the side ~~member~~ members to extend in the width direction of the vehicle,

wherein the impact load transfer mechanism comprises:

a side-member front area arranged in front of ~~the~~ each reinforcing part to incline outwardly in the width direction ~~as directing ahead~~ of the vehicle, the side-member front area being provided with a strength control mechanism that controls a strength of ~~the~~ each side member so that the maximum stress generated in the front part of each one of ~~imaginary~~ sections ~~continuing arranged~~ in the longitudinal direction of ~~the~~ each side member becomes more than or close to the maximum stress generated in the rear part of the each one of ~~imaginary~~ the sections;

a sub-side member arranged so as to extend from ~~the vicinity of the~~ each reinforcing part toward the front of the vehicle, substantially straight relative to an extension of a side-member rear area, the sub-side member connected to the bumper reinforcement at a front end, of the sub-side, member; and

a deformation-mode control mechanism that allows the sub-side member to be deformed inwardly in the width direction of the vehicle due to the impact load, thereby to render the sub-side member interfere interfered with the power unit.

3. (Original) The vehicle front body structure of claim 2, wherein the side-member front area has its front end detachably connected with the bumper reinforcement, while the sub-side member has its front end fixed with the bumper reinforcement integrally, and

the sub-side member has its rear end detachably connected with a connecting part between the side-member front area and the side-member rear area.

4. (Currently Amended) The vehicle front body structure of claim 2, wherein the side-member front area is separately formed in a different body from the side-member rear area, while the rear end of the side-member front area is detachably connected with the side member rear area at the vicinity of the reinforcing part, and the sub-side member is integrally formed in one body with the side-member rear area.

5. (Currently Amended) The vehicle front body structure of claim 2, wherein the each reinforcing part at the front end of the side-member rear area has a curved part formed to incline outwardly in the width direction of the vehicle, the side-member front area is separated from the front end of the curved part by a plane perpendicular to the longitudinal direction of the curved part, the side-member front area is detachably connected to the curved part, and the rear end of the sub-side member is also detachably connected to the curved part.

6. (Currently Amended) The vehicle front body structure of claim 5, wherein the sub-side member is connected with the curved part ~~of the side member rear area~~ by two bolts penetrating the curved pan vertically,

one of the two bolts is positioned in ~~the a~~ rear part of the curved part, at a position close to the inside face of the curved part in the width direction of the vehicle, and

the other one of the two bolts is positioned in ~~the a~~ front part of the curved part, at a position close to the outside face of the curved part in the width direction of the vehicle.

7. (Original) The vehicle front body structure of claim 2, wherein the deformation-mode control mechanism includes:

first notches formed, in the vicinity of the rear end of the sub-side member, on upper and lower ridgelines thereof respectively, inside in the width direction of the vehicle; and

second notches formed on upper and lower ridgelines of the sub-side member, outside in the width direction of the vehicle, the second notches being forwardly apart from the first notches at a predetermined distance each.

8. (Withdrawn) The vehicle front body structure of claim 2, wherein the deformation-mode control mechanism includes:

a third vertical notch formed, in the vicinity of the rear end of the sub-side member, on an inside face thereof in the width direction of the vehicle, the third notch swelling outwardly in the width direction of the vehicle; and

a fourth vertical notch formed on an outside face of the sub-side member, in the width direction of the vehicle, the fourth vertical notch swelling inwardly in the width direction

of the vehicle, the fourth vertical notch being forwardly apart from the third notch at a predetermined distance.

9. (Withdrawn) The vehicle front body structure of claim 2, wherein the deformation-mode control mechanism includes the sub-side member comprising:
 - an inclined part formed to incline inwardly in the width direction of the vehicle, the inclined part extending from the rear end of the sub-side member forwardly by a predetermined distance; and
 - a continuous part formed to be connected to the inclined part forwardly, the continuous part being paralleled with the fore-and-aft direction of the vehicle or inclined outwardly in the width direction of the vehicle.

10. (Withdrawn) The vehicle front body structure of claim 2, wherein the power unit is provided with a projection that can engage with a deformation peak part of the sub-side member being folded inwardly in the width direction of the vehicle by a collision input.

11. (Currently Amended) The vehicle front body structure of claim 2, further comprising a sub-frame connected to each reinforcing part at the vicinities of supporting points of the longitudinal structural member members mounting the power unit thereon.

12. (Currently Amended) A vehicle front body structure, comprising:
a pare pair of longitudinal structural members;
a front compartment formed inside the longitudinal structural members;

a power unit connected to the longitudinal structural members and placed in the front compartment; and

impact load transfer means for changing ~~the an~~ impact load direction to a lateral direction for transmitting ~~the an~~ impact load to one of the longitudinal structural ~~member~~ members and the power unit directly, the impact load transfer means formed outside the front compartment.

13. (New) The vehicle front body structure of claim 1,

wherein the longitudinal structural members comprise a pair of side members arranged on left and right sides of the front compartment to extend in the fore-and-aft direction of the vehicle, the side members each having a reinforcing part for mounting the power unit,

wherein the vehicle front body structure further comprises a bumper reinforcement connected with the front ends of the side members to extend in the width direction of the vehicle,

wherein the impact load transfer mechanism comprises:

a side-member front area arranged in front of each reinforcing part to incline outwardly in the width direction of the vehicle;

a sub-side member arranged so as to forwardly extend from each reinforcing part, the sub-side member connected to the bumper reinforcement; and

a deformation-mode control mechanism that allows the sub-side member to be deformed inwardly in the width direction of the vehicle due to the impact load, thereby to render the sub-side member interfered with the power unit.

14. (New) The vehicle front body structure of claim 1,
wherein the longitudinal structural members comprise a pair of side members arranged on
left and right sides of the front compartment to extend in the fore-and-aft direction of the vehicle,
the side members each having a reinforcing part for mounting the power unit.

15. (New) The vehicle front body structure of claim 14,
wherein the vehicle front body structure further comprises a bumper reinforcement
connected with the front ends of the side members to extend in the width direction of the vehicle.

16. (New) The vehicle front body structure of claim 15,
wherein the impact load transfer mechanism comprises:
a side-member front area arranged in front of each reinforcing part to incline outwardly in
the width direction of the vehicle, the side-member front area being provided with a strength
control mechanism that controls a strength of each side member so that the maximum stress
generated in the front part of each one of sections arranged in the longitudinal direction of each
side member becomes more than or close to the maximum stress generated in the rear part of the
each one of the sections.

17. (New) The vehicle front body structure of claim 16,
wherein the impact load transfer mechanism further comprises:
a sub-side member arranged so as to extend from each reinforcing part toward the front
of the vehicle, substantially straight relative to an extension of a side-member rear area, the sub-
side member connected to the bumper reinforcement at a front end of the sub-side member.

18. (New) The vehicle front body structure of claim 17,

wherein the impact load transfer mechanism further comprises:

a deformation-mode control mechanism that allows the sub-side member to be deformed inwardly in the width direction of the vehicle due to the impact load, thereby to render the sub-side member interfered with the power unit.

19. (New) The vehicle front body structure of claim 17, wherein

the side-member front area has its front end detachably connected with the bumper reinforcement, while the sub-side member has its front end fixed with the bumper reinforcement integrally, and

the sub-side member has its rear end detachably connected with a connecting part between the side-member front area and the side-member rear area.

20. (New) The vehicle front body structure of claim 17, wherein

the side-member front area is separately formed from the side-member rear area, while the rear end of the side-member front area is detachably connected with the side member rear area at the vicinity of the reinforcing part, and

the sub-side member is integrally formed with the side-member rear area.

21. (New) The vehicle front body structure of claim 17, wherein

each reinforcing part at the front end of the side-member rear area has a curved part formed to incline outwardly in the width direction of the vehicle,

the side-member front area is separated from the front end of the curved part by a plane perpendicular to the longitudinal direction of the curved part,
the side-member front area is detachably connected to the curved part, and
the rear end of the sub-side member is also detachably connected to the curved part.